



# CYP SDM-XT-4K Video Streaming And Recording Module Card Owner's Manual

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**CYP SDM-XT-4K Video Streaming And Recording Module Card**



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## SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

**Please keep the following in mind as you unpack and install this equipment:**

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazards, do not expose the unit to rain, or moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person to walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate the unit.
- Please completely disconnect the power when the unit is not in use to avoid wasting electricity.

## VERSION HISTORY

REV.	DATE	SUMMARY OF CHANGE
RDV1	2023/07/18	Preliminary release

## INTRODUCTION

- This H.264/265 Live Video Streaming and Recording Module Card is a reliable, high-performance, module card that makes online broadcasting of live video, with a locally stored archive, an easy and simple process.
- Video content up to 4K UHD+ is supported and is automatically scaled to a resolution that is more appropriate for efficient streaming to popular online services (such as YouTube, Facebook, Twitch, etc.) using the standard RTSP/TCP/UDP/RTMP protocols.
- All video content is encoded and streamed with minimal latency and high quality, making it ideal for live-streaming events to a variety of popular online streaming services or within the local network.
- The video may also be recorded locally (via a USB thumb drive) or to a local network drive while it is being streamed.
- The module's design is compatible with a variety of products that have a standard CYP (UK) Module Slot, offering increased flexibility to customers.

## APPLICATIONS

- Webcasting
- Social Media Broadcasting
- Live Event Streaming
- Video on Demand Streaming
- Live Recording and Storage

## PACKAGE CONTENTS

- 1 × H.264/265 Live Video Streaming and Recording Module Card

- 1× Operation Manual

## SYSTEM REQUIREMENTS

- Must be installed into a product with an available compatible CYP (UK) Module Slot
- **Note:** Despite appearances, this card is NOT designed for installation into a PC's PCIe card slot and should only be installed in officially compatible products.
- Available streaming server destinations such as YouTube or Facebook or a recording storage target such as a NAS or USB thumb drive.
- To view RTSP streams directly on the local network, RTSP stream-compatible video player software (such as VLC Media Player or PotPlayer) must be used.

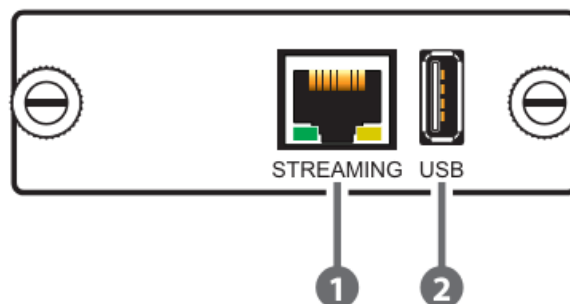
**Note:** For security reasons, it is strongly advised to maintain a firewall between this unit and the internet.

## FEATURES

- Supports video resolutions up to 4K@60Hz
- Generates streams using H.265 (Primary stream) and H.264 (3 Service targeted streams)
- Supports live streaming to Facebook, YouTube, Twitch channels, and more!
- Supports independent recording to a user-determined destination
- Recorded video can be stored on locally connected USB storage (FAT or exFAT format) or to a designated network drive supporting NFS or CIFS

## OPERATION CONTROLS AND FUNCTIONS

### Front Panel

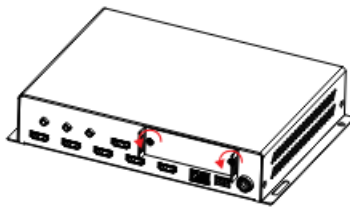


1. **STREAMING** Port: Connect to a network switch or router for transmission of streamed video.
2. **USB Port:** Attach a standard USB thumb drive for storage of recorded video.
  - **Note:** Storage media must be formatted as FAT32 or exFAT. Video files are stored in \*.mp4 format. Up to 1A is available to power an external USB device.

### Card Installation

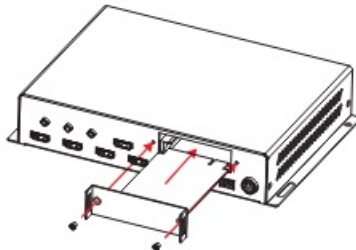
To install this module card into your unit, it must have at least one available CYP (UK) Module Slot.

1. Before installation, power the unit completely off.

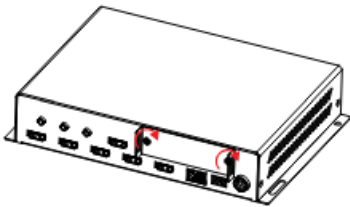


2. Remove the dummy faceplate that is covering the card module slot by unscrewing both screws.

- **Note:** Be sure to store the dummy faceplate somewhere safe, in case you need to use it again later.



3. Align the card with the guide rails to each side of the module slot, and gently slide the module card into the slot until its faceplate is flush with the back of the unit.

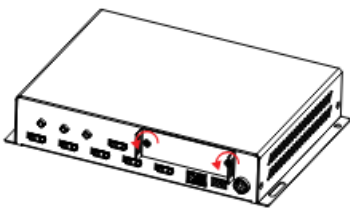


4. Secure the module to the unit by using the supplied screws.

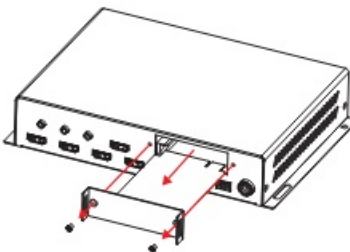
5. The unit may now be powered back on. The card's power LED will light up to indicate it is receiving power. In most cases, the card will be automatically detected by the unit and be available for use.

## Card Removal

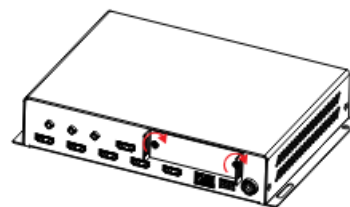
1. Before removal, power the unit completely off.



2. Completely unscrew both screws.



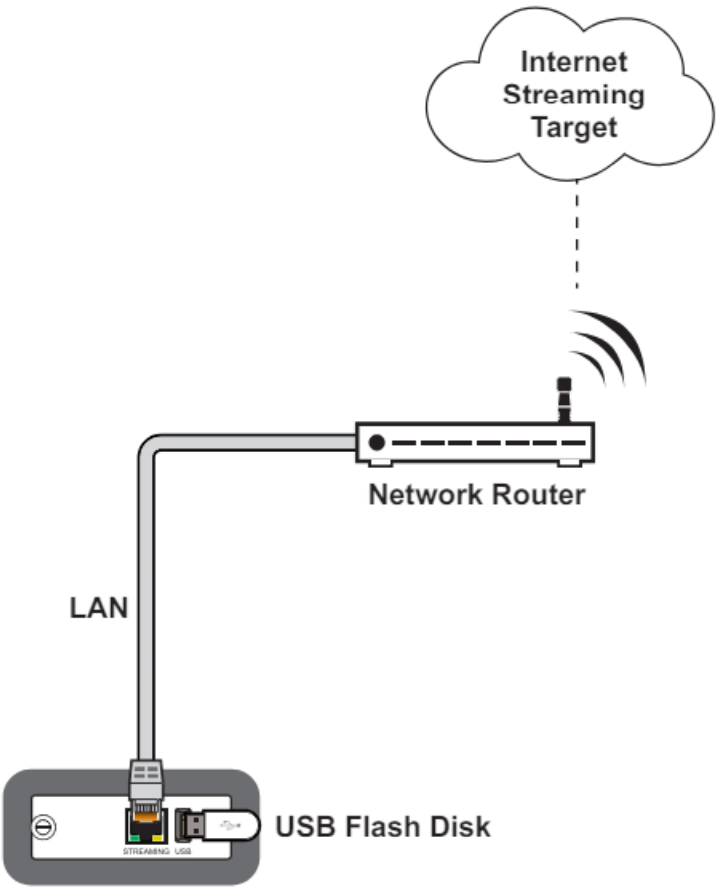
3. Gently pull the card straight out of the module slot, using the provided handles.



4. Cover the module slot with a dummy faceplate and tighten both screws.

5. The unit may now be powered back on.

CONNECTION DIAGRAM



SPECIFICATIONS

Technical Specifications

















- **Ethernet Bandwidth** 1Gbps
- **Card Slot Format** 1×CYP (UK) Module
- **Output Ports** 1×LAN (RJ-45) 1×USB 2.0 (Type-A)
- **ESD Protection (HBM)** ±8kV (Air Discharge) ±4kV (Contact Discharge)
- **Dimensions (W×H×D)** 80mm×25mm×120mm [Case Only] 79mm×25mm×128mm [All Inclusive]
- **Weight** 85g
- **Chassis Material** (Face) Metal (Steel)
- **Chassis Colour** Black
- **Operating Temperature** 0°C – 40°C/32°F – 104°F
- **Storage Temperature** -20°C – 60°C/-4°F – 140°F
- **Relative Humidity** 20 – 90% RH (Non-condensing)
- **Power Consumption** 15W

Video Specifications

		Input	Output
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Supported Resolutions (Hz)	Card Slot	Streaming
720×400p@70/85		
640×480p@60/72/75/85		
720×480i@60		
720×480p@60		
720×576i@50		
720×576p@50		
800×600p@56/60/72/75/85		
848×480p@60		
1024×768p@60/70/75/85	60	60
1152×864p@75		
1280×720p@50/60	60	60
1280×768p@60/75/85	60	60
1280×800p@60/75/85		
1280×960p@60/85		
1280×1024p@60/75/85		
1360×768p@60		
1366×768p@60		

1400×1050p@60		
1440×900p@60/75		
1600×900p@60RB		
1600×1200p@60		
1680×1050p@60		
1920×1080i@50/60		
1920×1080p@24/25/30		

Supported Resolutions (Hz)	Input		Output	
	Card Slot		Streaming	
1920×1080p@50/60	60	60		
1920×1200p@60RB				
2560×1440p@60RB				
2560×1600p@60RB				
2048×1080p@24/25/30				
2048×1080p@50/60				
3840×2160p@24/25/30				
3840×2160p@50/60 (4:2:0)				
3840×2160p@24, HDR10				



3840×2160p@50/60 (4:2:0), HDR10	✓	✓
3840×2160p@50/60	✓	✓
4096×2160p@24/25/30	✗	✗
4096×2160p@50/60 (4:2:0)	✗	✗
4096×2160p@24, HDR10	✗	✗
4096×2160p@50/60 (4:2:0), HDR10	✗	✗
4096×2160p@50/60	✗	✗

#### Audio Specifications Digital Audio

Card Slot Input / Streaming Output	
LPCM	
Max Channels	2 Channels
Sampling Rate (kHz)	48
Bitstream	
Supported Formats	None

#### Cable Specifications

Cable Length	4K HD	4K FHD	UHD	UHD+	8K UHD
Ethernet Cable					
Cat.5e/6	100m				✗
Cat.6A/7	100m				✗

## **Bandwidth Category Examples:**

- **HD Video**

- 720p@60Hz
- HDMI transmission rates lower than 3Gbps
- HD-SDI (SMPTE 292M, 1.485Gbps)

- **FHD Video**

- 1080p@60Hz
- HDMI transmission rates between 3Gbps and 5.3Gbps
- 3G-SDI (SMPTE 424M, 2.970Gbps)

- **4K UHD Video**

- 4K@24/25/30Hz (8-bit colour) & 4K@50/60Hz (4:2:0, 8-bit colour)
- HDMI transmission rates between 5.3Gbps and 10.2Gbps
- 6G-SDI (SMPTE ST 2081, 6Gbps)

- **4K UHD+ Video**

- 1080p@120Hz (10/12-bit HDR)
- 4K@50/60Hz (4:4:4, 8-bit) & 4K@50/60Hz (4:2:0, 10/12-bit HDR)
- HDMI transmission rates between 10.2Gbps and 18Gbps
- 12G-SDI (SMPTE ST 2082, 12Gbps)

- **8K UHD Video**


- 4K@120Hz (10/12-bit HDR)
- 8K@24/25/30Hz (10/12-bit HDR) & 8K@50/60Hz (4:2:0, 8-bit colour)
- HDMI transmission rates between 18Gbps and 48Gbps
- 24G-SDI (SMPTE ST 2083, 24Gbps)

## **ACRONYMS**

<b>ACRONYM</b>	<b>COMPLETE TERM</b>
<b>4K UHD</b>	4K Ultra-High-Definition (10.2Gbps max)
<b>4K UHD+</b>	4K Ultra-High-Definition (18Gbps max)
<b>8K UHD</b>	8K Ultra-High-Definition (48Gbps max, without DSC)
<b>8K UHD+</b>	8K Ultra-High-Definition (48Gbps max, with DSC)
<b>GbE</b>	Gigabit Ethernet
<b>Gbps</b>	Gigabits per second
<b>HDMI</b>	High-Definition Multimedia Interface
<b>HDR</b>	High Dynamic Range
<b>IP</b>	Internet Protocol
<b>kHz</b>	Kilohertz
<b>LED</b>	Light-Emitting Diode
<b>LPCM</b>	Linear Pulse-Code Modulation
<b>MHz</b>	Megahertz
<b>PCIe</b>	Peripheral Component Interconnect Express
<b>SNR</b>	Signal-to-Noise Ratio
<b>TCP</b>	Transmission Control Protocol
<b>THD+N</b>	Total Harmonic Distortion plus Noise
<b>TMDS</b>	Transition-Minimized Differential Signaling
<b>USB</b>	Universal Serial Bus
<b>VGA</b>	Video Graphics Array
<b>WUXGA (RB)</b>	Widescreen Ultra Extended Graphics Array (Reduced Blanking)
<b>XGA</b>	Extended Graphics Array
<b>Ω</b>	Ohm

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- [www.cypeurope.com](http://www.cypeurope.com)
- RDV1

## Documents / Resources

	<p><a href="#">CYP SDM-XT-4K Video Streaming And Recording Module Card</a> [pdf] Owner's Manual SDM-XT-4K Video Streaming And Recording Module Card, SDM-XT-4K, Video Streaming And Recording Module Card, Streaming And Recording Module Card, And Recording Module Card, Module Card, Card</p>
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## References

- [User Manual](#)

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